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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/048,086	03/05/2002	Jorg Tillack	Mo-6924/LeA 33,697	1660

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EXAMINER	
SELLERS, ROBERT E	

ART UNIT	PAPER NUMBER
1712	

DATE MAILED: 01/07/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)
	10/048,086	TILLACK ET AL.
	Examiner	Art Unit
	Robert Sellers	1712

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☐ Responsive to communication(s) filed on _____.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) 1-32 is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) 1-32 is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. §§ 119 and 120

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☒ All b)☐ Some * c)☐ None of:

1.☒ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

13)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application) since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.

a) ☐ The translation of the foreign language provisional application has been received.

14)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121 since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 1203.
4) ☐ Interview Summary (PTO-413) Paper No(s). _____.
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other:

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

Claims 1-32 are rejected under 35 U.S.C. 103(a) as being unpatentable over Schmalstieg et al in view of Groegler et al.

Schmalstieg et al. (cols. 8, Example 5) shows a solventless reactive system curable at room temperature comprising an isocyanate polyether prepolymer having a molecular weight of from 168-25,000 (col. 2, lines 1-3) blocked with a phenolic group-containing hydrocarbon resin, 3,3'-dimethyl-4,4'-diaminocyclohexylmethane, a catalyst (cols. 6-7, Example 2) and a bisphenol A epoxy resin.

The claimed 2,3-dimethyl-3,4,5,6-tetrahydropyrimidine catalyst is not exemplified, although 1-substituted-2-methyl-tetrahydropyrimidines are disclosed which are described in German Patent No. 2,439,550 (col. 5, lines 28-30).

Groegler et al. is the U.S. patent equivalent of the German patent and teaches the claimed species of 2,3-dimethyl-3,4,5,6-tetrahydropyrimidine catalyst (col. 1, lines 9-21, general formula (I); col. 5, line 65; col. 6, line 42; col. 7, lines 5, 59-60 and 67).

It would have been obvious to employ the catalyst of 2,3-dimethyl-3,4,5,6-tetrahydropyrimidine exhibited in Groegler et al. as the catalyst of Schmalstieg et al. since Schmalstieg et al. specifically refers the compound of

Groegler et al. as a suitable catalyst.

Claims 1-32 are rejected under 35 U.S.C. 103(a) as being unpatentable over Lauman and Xiao et al. in view of (Schmalstieg et al. and Boutillier et al.) and (Japanese Patent No. 50-117771 and Tarbutton et al.)

Lauman (col. 1, lines 31-44) discloses a coating composition comprising "any suitable blocked isocyanate prepolymer (col. 2, lines 64-67)" having an equivalent weight of from 860-1000 (col. 3, lines 1-3), a cycloaliphatic diamine (col. 3, lines 28-30) and a bisphenol A epoxy resin (col. 2, lines 25-27).

Xiao et al. (col. 1, lines 44-48) espouses a coating prepared from a blocked polyurethane prepolymer, "any curing agent useful with epoxy resins and known to one skilled in the art (col. 4, lines 15-19)," a bisphenol A epoxy resin (col. 4, lines 10-11) and a catalyst "well known to those skilled in the art (col. 4, lines 39-42)."

The claimed phenolic-containing hydrocarbon resin as the blocked agent for the polyisocyanate is not recited. Schmalstieg et al. (col. 1, lines 18-55 and col. 2, lines 1-5) sets forth improvement accruing from the use of a phenolic-containing hydrocarbon resin as a blocking agent for a polyisocyanate in combination with an epoxy resin and a polyamine. Boutillier et al. acknowledges the blocking of a polyisocyanate with a terpene-phenolic resin "in order to reinforce the subsequent adhesive properties (col. 2, lines 46-52)."

It would have been obvious to block the polyisocyanate of Lauman and Xiao et al. with the phenolic-containing hydrocarbon resin of Schmalstieg et al. and Boutillier et al. in order to enable more rapid curing at lower temperatures, eliminate malodorous volatilization of the blocking agent, prevent the release of the blocking agent leading to adhesion problems (Schmalstieg et al.), and to enhance the adhesion (Boutillier et al.).

The claimed 2,3-dimethyl-3,4,5,6-tetrahydropyrimidine catalyst is not recited. The Japanese patent reveals the reaction of a bisphenol A epoxy resin with a diisocyanate in the presence of 1,2-dimethyl-1,4,5,6-tetrahydropyrimidine (equivalent to 2,3-dimethyl-3,4,5,6-tetrahydropyrimidine according to Chemical abstracts registry no. 4271-96-9). Tarbutton et al. (col. 9, lines 9-20) recognizes the copolymerization of a bisphenol A epoxy resin (col. 8, line 2) and an amine in the presence of 1,2-dimethyl-1,4,5,6-tetrahydropyrimidine.

It would have been obvious to use the 2,3-dimethyl-3,4,5,6-tetrahydropyrimidine of the Japanese patent and Tarbutton et al. as the catalyst of Lauman and Xiao et al. in order to optimize the reaction rate and/or temperature and to improve the load durability and impact resistance (Tarbutton et al., col. 9, lines 11-15).

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Gan et al. is cited in Xiao et al. (col. 4, lines 15-19) with respect to the types of suitable epoxy resin curing agents including cycloaliphatic diamines (Gan et al., col. 12, lines 38-41).

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Robert Sellers
Primary Examiner
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rs
12/18/03